THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE AS FOLLOWS:

1. A process for the preparation of amorphous atorvastatin calcium which comprises:

(a) hydrolysis of the atorvastatin lactone of formula II to form atorvastatin sodium salt solution;

(b) addition of the atorvastatin sodium salt solution to an aqueous calcium chloride or calcium acetate solution; and

(c) isolation by filtration and drying to afford amorphous atorvastatin calcium salt.

2. The process of claim 1 wherein the amorphous atorvastatin calcium contains at least one of the following:

(i) residual amounts of water,

(ii) residual amounts of solvent other than water.

3. The process of claim 1 or 2, wherein the hydrolysis of atorvastatin lactone of formula II is accomplished using sodium hydroxide, resulting in an atorvastatin sodium salt solution.

4. The process of any one of claims 1 to 3, wherein the solution of atorvastatin sodium in water and methanol is added to a solution of calcium chloride or calcium acetate in water containing seeds of amorphous atorvastatin calcium.

5. The process of claim 4 wherein the quantity of seeds of amorphous atorvastatin calcium is in the range of from about 0.05 to about 10 weight percent relative to the atorvastatin lactone.

6. The process of claim 5 where the quantity of seeds of amorphous atorvastatin calcium is in the range of from about 0.1 to about 5 weight percent relative to the atorvastatin lactone.

7. The process of claim 6 where the quantity of seeds of amorphous atorvastatin calcium is in the range of from about 0.2 weight percent relative to the atorvastatin lactone.

8. The process of any one of claims 1 to 3, wherein the solution of atorvastatin sodium in water and methanol is added to a solution of calcium chloride or calcium acetate in water without seeds of amorphous atorvastatin calcium.

9. The process of claim 3, wherein the stoichiometry of the sodium hydroxide relative to atorvastatin lactone is from about 0.85 to about 1.05 equivalents.

10. The process of claim 3, wherein the stoichiometry of the sodium hydroxide relative to atorvastatin lactone is from about 0.9 to about 1.0 equivalents.

11. The process of claim 3, wherein the stoichiometry of the sodium hydroxide relative to atorvastatin lactone is about 0.98 equivalents.

12. The process of claim 1 or 2 where the stoichiometry of calcium chloride or calcium acetate relative to atorvastatin lactone is from about 0.4 to 1.5 equivalents.

13. The process of claim 1 or 2 where the stoichiometry of calcium chloride or calcium acetate relative to atorvastatin lactone is from about 0.45 to 0.55 equivalents.

14. The process of claim 1 or 2 where the stoichiometry of calcium chloride or calcium acetate relative to atorvastatin lactone is from about 0.5 equivalents.

15. The process of claim 1 or 2 wherein the hydrolysis reaction requires from about 1 to 24 hours.

16. The process of claim 1 or 2 wherein the hydrolysis reaction requires from about 10 to 20 hours.

17. The process of claim 1 or 2 wherein the hydrolysis reaction requires from about 12 to 14 hours.

18. Amorphous atorvastatin calcium substantially free of residual solvents.

19. The process of any of claims 1, 2, 3, 4 or 8 wherein the product is substantially free of residual solvents.

20. The use of amorphous atorvastatin calcium substantially free of residual solvents in the manufacture of a pharmaceutical composition for treating hypercholesterolemia.

21. For use in inhibiting cholesterol synthesis in a human suffering from hypercholesterolemia, a compound of claim 18.

22. The compound of claim 18 wherein the residual solvents are selected from water and methanol.

23. A process for the preparation of amorphous atorvastatin calcium which comprises:

(a) hydrolysis of the atorvastatin lactone of formula II to form atorvastatin salt solution;

(b) addition of the atorvastatin salt solution to an aqueous calcium salt solution; and

(c) isolation by filtration and drying to afford amorphous atorvastatin calcium salt.

24. Use of amorphous atorvastatin calcium substantially free of residual solvents in the treatment of hypercholesterolemia.